

Work Order ID 143631

143631

Page 1

Item ID: D3696-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Arm Assembly

Stop

NS2

Start Date: 3/22/2016 Start Qty: 4.00

~~*4*~~

10

Required Date: 4/4/2016 Req'd Qty: 4.00

~~*4*~~

10

STA

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

SW

Date:

20160317

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3696	Rev D

100		0.00							
-----	--	------	--	--	--	--	--	--	--

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blank 17.600" long

11

Ø

DAS
44
9-89

16/03/22

110

0.01

110

HAAS 1

Memo

0.04

HAAS CNC vertical machine #1

MILL AS PER DWG AND FOLIO FA918

DWG REV: D

FOLIO REV: 84

DEBURR

10

1

DAS
44
9-89

16/03/27

PTO →

DQA: _____ Date: _____

QA Closed: [Signature] Date: 16/04/28 **WORK ORDER NON-CONFORMANCE / UPDATE**



Work Order update only ☐

Work Order: <u>143631</u> Part No. <u>D3696-041</u> NCR No. <u>16-5749</u>	DISPOSITION		AGAINST DEPARTMENT/PROCESS							
	Rework	☐	Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
	Scrap	☒	Machining	☒	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐
	Use-as-is	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
	Suspected Unapproved	☐	Large Fab	☐	Composite	☐	Supplier	☐		

Date: <u>16-03-28</u>	Step #: <u>110</u>	QTY Effective: <u>①</u>	MRB (QS1042) Approval
-----------------------	--------------------	-------------------------	-----------------------

Description Work Order Deviation	Disposition	PD 16-03-28
Machined Reamed hole $\phi .566" \pm .001$ came out oversized at .569" BC being no .569 reamer <u>BC</u> Operator put too much offset on tool radius	scrap + destroy. Replace <u>B132142</u>	Completed By <u>DAS</u> <u>AS</u> <u>BC9</u> 16/03/28 Lead hand / Supervisor Approval Verification <u>AS</u> 16/03/28 QC / QA Coordinator Approval <u>PD</u> 16-03-28

Root Cause		FAULT CATEGORY							
Environment	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☒	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Marks/Chatter	☒	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	OTHER :							
Misidentified	☐								

DQA:

Date: 16.05.10



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: 16/04/28

Work Order update only ☐

Work Order: 143631		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. D3696-1		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☒		
NCR No. 16-5750		Scrap ☐		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☒		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date: 16-04-01		Step #: 110		QTY Effective: 10			MRB (QSI042) Approval		
							DAS 22 16.04.01		
Description Work Order Deviation				Disposition				Completed By	
φ .566 ^{+0.001} _{-.000} is machined to φ .5645" to get a .0005" (press fit) with the sleeves (D3799-1 Bushing) that we have in stock. (D3799-1 B44915 φ is .5650") on all bushings of this batch				acceptable to use as is				DAS 03 9-03 16/03/31	
								Lead hand / Supervisor Approval Verification	
								DAS 08 9-02 16/03/31	
								QC / QA Coordinator Approval	
								DAS 9 3-89 16-04.01	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☒	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Set-up ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	☒ Fit/Function	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 143631

143631

Page 3

Item ID: D3696-041
 Revision ID:
 Item Name: Arm Assembly
 Start Date: 3/22/2016 Start Qty: 4.00
 Required Date: 4/4/2016 Req'd Qty: 4.00
 Reference:

Accept ***N900040100*** Setup Start ***NS1***
 Stop ***NS2***

Cust Item ID:
 Customer:

4
4

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00							
150	<i>n 130746</i>					<i>10</i>	<i>0</i>	<i>16-04-20</i>	<i>23</i>
Powdercoat	Memo	0.01							
Powder Coating	<i>225</i> 1- mask prior to painting as per dwg (see note 8) START TIME: <i>2:55</i> OVEN TEMPERATURE: <i>320°</i> FINISH TIME: <i>2:55</i>								
160	QC3- Inspect Part Finish	0.00							
160						<i>10</i>	<i>FF</i>	<i>APR 21 2016</i>	
QC	Memo	0.00							
Quality Control									
170	Small Fab	0.00							
170						<i>10</i>	<i>FF</i>	<i>APR 21 2016</i>	
Small Fab	Memo	0.02							
Small Fab	1-Install Helicoil2-Press Bushing 3-Install Plunger								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
										QC / QA Coordinator Approval															
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Work Order ID 143631

143631

Page 4

Item ID: D3696-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Arm Assembly
 Start Date: 3/22/2016 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 4/4/2016 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				(10)			DAS 38 3-89 APR 21 2016
190 *190* Packaging Packaging	Identify as per dwg & Stock Location: Stg 25 Memo 457	0.00 0.00				10			DAS 6 9-89 APR 22 2016
200 *200* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.01				MLJ			APR 22 2016

MLJ APR 22 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

Picklist Print

March 17, 2016 12:52:46 PM

Page 1

Work Order ID: 143631

143631

Parent Item: D3696-041

D3696-041

Parent Item Name: Arm Assembly

Start Date: 3/22/2016

Required Date: 4/4/2016

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:A New Issue 08-05-01 JLM Verified By:EC
IPP Rev:B 08-07-22 redesign part (prelim) DD verified by:EC IPP
REV:C NOW ON CNC MILL 10-03-17 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M7075T6B1.000X1.000

Purchased

No

100

f

23.3940

1.53

6.123062

DAS

M7075T6B1 000X1 000

7075 T6 BAR 1.00 x1.00

**

44

9-89

16/03/22

Location

Loc Qty

Loc Code

MAT005

23.394

*M128436

23.394

D3799-1

Manufactured

No

170

Each

20.0000

1

4

D3799-1

Oilite Bronze Bushing

7075-1.250 x 1.000

132142

44915

**

15.4'

1.469'

10

FF

APR 21 2016

Location

Loc Qty

Loc Code

ST054

20

44915

20

D3801-3

Manufactured

No

170

Each

5.0000

1

4

D3801-3

Hand Retractable Spring Plunger

**

FF

APR 21 2016

Location

Loc Qty

Loc Code

ST054

5

143633

104530

5

MS21209C8-20

Purchased

No

170

Each

168.0000

1

4

MS21209C8-20

Heli Coil Insert

**

FF

APR 21 2016

Location

Loc Qty

Loc Code

ST297

168

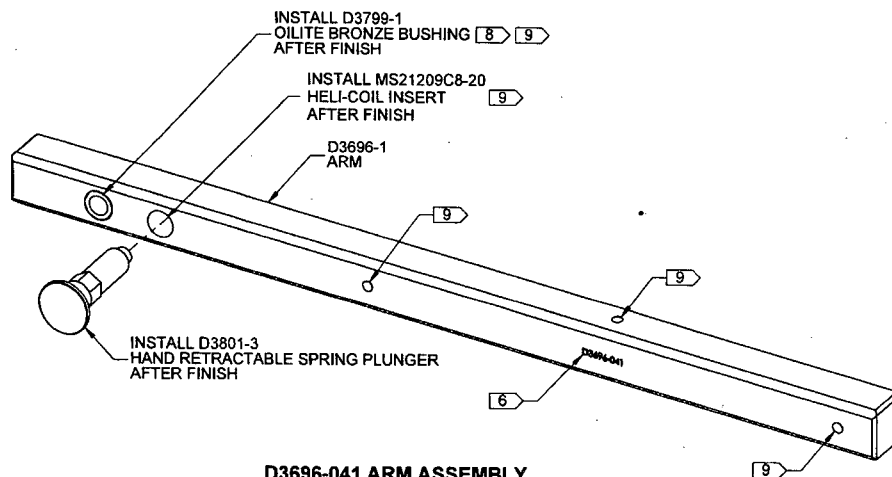
108066

131

120274

37

10



D3696-041 ARM ASSEMBLY

D3696-041 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3696-041" USING FINE POINT PERMANENT INK MARKER LOCATED APPROXIMATELY AS SHOWN
- 7) WEIGHT: 1.68 lbs
- 8) FACE D3799-1 OILITE BRONZE BUSHING FLUSH TO D3696-1 ARM AS REQUIRED ON BOTH SIDES PRIOR TO POWDER COATING
- 9) MASK HOLES AS SHOWN PRIOR TO POWDER COATING

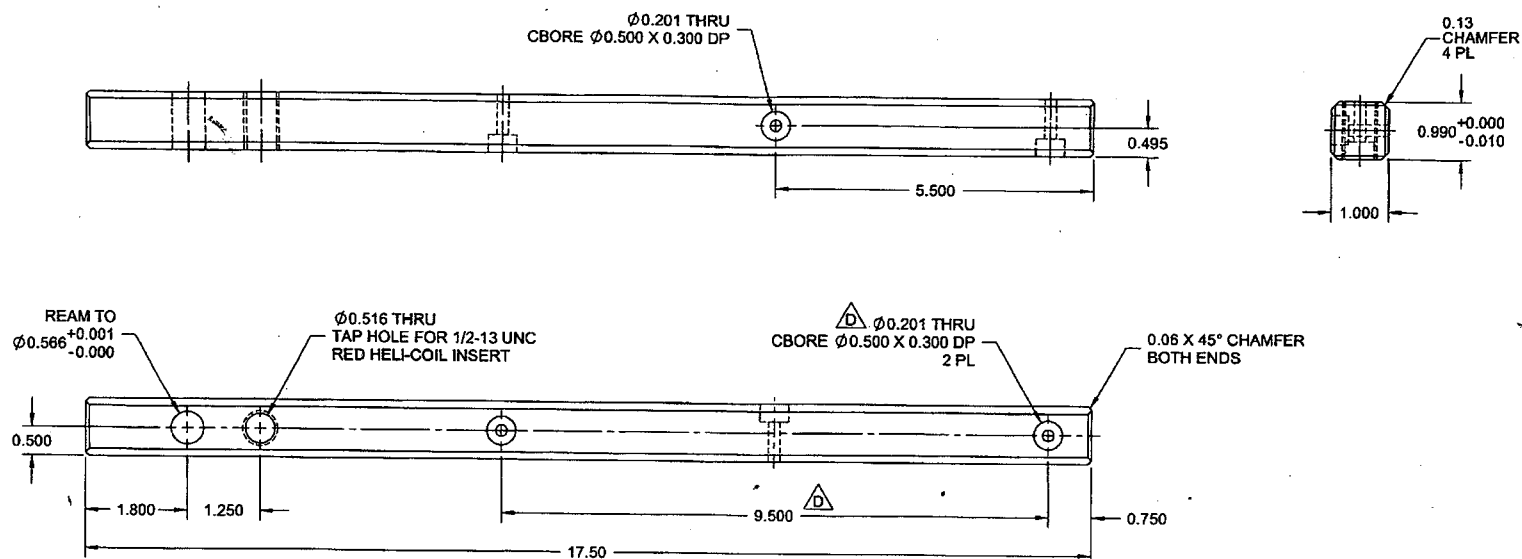
ITEM	QTY -041	P/N	DESCRIPTION
1	X	D3696-041	ARM ASSEMBLY
5	1	D3696-1	ARM
6	1	D3799-1	OILITE BRONZE BUSHING
7	1	D3801-3	HAND RETRACTABLE SPRING PLUNGER
11	1	MS21209C8-20	HELI-COIL, SCREW LOCKING (RED)

20160318

RELEASED
2010-05-17

SA 143631

D	REVISED ITEM 5 AS FOLLOWS: Ø0.201 THRU CBORE Ø0.500 X 0.300 DP WAS 2 PL (ZN C4-2 AND B4-2). REASON: ADDITION OF ALTERNATE ARMREST INSTALLATION D412-761-051 BASED ON FEEDBACK FROM END USERS AT HAI 2010	MB	10.05.06
C	REVISED ITEM 5 AS FOLLOWS: Ø0.201 THRU CBORE Ø0.500 X 0.300 DP WAS 2 PL (ZN C4-2). REASON: REDESIGNED ARMREST CUSHION BASED ON FEEDBACK FROM END USERS AT HAI 2009	MB	09.06.17
B	P/N D3799-1 WAS BNT-137 (ZN D6-1); P/N D3801-3 WAS PRT-12 (ZN C7-1) - REASON: PURCHASED PARTS NOW PROCURED THROUGH D3799 AND D3801 SPEC CONTROL DRAWINGS: ADDED Ø0.201 HOLE AND CBORE (ZN C6-2 AND D5-2); 17.50 WAS 19.50 (ZN B5-2); 1.000 WAS 0.990 +0.000/-0.010 (ZN C2-2); POCKETS REMOVED REASON: ELIMINATED FWD-AFT ARMREST ADJUSTMENT	MB	08.07.17
A	NEW ISSUE	MB	08.04.18
REV.	DESCRIPTION	BY	DATE
DESIGN	LE		
DRAWN	LE		
CHECKED	GP		
MFG. APPR.	SA		
APPROVED	SA		
DE APPR.	SA		
DATE	10.05.06		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3696 TITLE ARM ASSEMBLY REV. D SHEET 1 OF 2 SCALE NTS COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



D3696-1 ARM

RELEASED
2010-05-17
M

D3696-1 NOTES:

- 1) MATERIAL: 7075-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER AMS-QQ-A-225/9 (OR AMS 4122/4123/4186/4187) OR
PER AMS-QQ-A-200/11
REF. DART SPEC. M7075T6B
- 2) FINISH: SEE SHEET 1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.62 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D3696	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		ARM ASSEMBLY	NTS
DATE	10.05.06	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND CONFIDENTIAL. IT IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

INSPECTION SHEET

Rev	Date	Change	Revised by	Approved
B	14 07 31	New Issue	KJ	